

# Order Initiation Dynamics and the Reform Of Business Flow for Haier

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[Abstract]: Supply chain is a new form of business patterns of modern industry and commerce. Through effectively managing the key customer and market, accurately forecasting and rapidly reacting to the customer demands, and furthest decreasing the inventory and transformation cost from raw materials to production, as well as the whole sales process, supply chain could provide customers with the best delivered value, and arise the whole competence for every member of the supply chain. Accordingly, Haier Group Company adjusted the organizational and managerial structure, and the business pattern antecedently, and created the conditions for the implementation of supply chain management and operation.

[Keywords]: Haier Group; supply chain management; business integration; information share; customer delivered value.

## Introduction

A revolutionary change has been taking place in marketing domain of household appliance industry in recent years. The core of this revolution is the transformation from pushing by the central plan of an enterprise to initiating by an order from customer. The basic reason of this transformation is that many enterprises have realized that the business flow pushed by firm's central plan has come to the end for its profitability, so firms have to been in search for new modes to gain profits. As the largest household appliance manufacture in China, Haier has been in the front line of this revolution.

### 1. External environment conditions for implementing of order initiating dynamic

Enterprises adopting the order initiating dynamics need a lot of demand

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orders from their customers. When firms transform their marketing manner from pushing by the central plan to initiating by orders, the first problem they are facing is if they could obtain as much demand orders as their plan from customers. If household appliance enterprises rely on themselves solely, it is rarely possible to get sufficient orders as they wanted. Household appliance firms depend mainly on central planning pushing mode, so it's a new project for them to adopt a new manner initiated by orders. Two external environment factors are the antecedent conditions for the adoption of order initiating dynamics.

### **1.1. Customers have abilities to forecast demands and take some risks**

Manufactures need to depend on customers, e.g. channel members, especially the retailers, to obtain plentiful and stable demand orders, so the abilities for forecasting and taking some risks of customers are very important. Retailers have more advantages in demand forecast naturally than manufacturers, for their position is near to the end consumers [1]. In addition, retailers are possible to decline the risks of management to the least degree through effective goods combination, delivery, and balance among their chain store. Naturally, retailers would transfer their risks through cutting down the profits of manufacturers [2], but maybe this is one of the main reasons that manufacturers could obtain plentiful and stable demand orders from retailers.

### **1.2. SCM construct should be established among business entities**

The implementation of order initiating dynamics depends on the establishment of supply chain management construct. Modern business competition is increasingly appearing the competition between supply chain and supply chain, not brand and brand, or firm and firm [1, 2]. To form business alliance with appropriate partners for competition is a necessary choice for business entities in the future.

## **2. Managerial requirement for implementing the order initiating dynamics**

### **2.1. Reform of managerial construct**

To implement the order initiating dynamics, enterprise must firstly carry out the reform of managerial construct. Firms traditionally implement

production, manufacture, and inventory programs under the central planning of the firms, and distribute their products to the marketing channel. Products flow through the factories to meet the production schedules. Under this system, firms often produce the error product mix, lead to unrequired inventories and excessive moving cost of inventories, price war and product moving [3]. To implement order-initiating dynamics, enterprises must focus on the demand of consumers; create demand and market for the products of a firm [4].

#### **2.1.1. Reconstruction of managerial mechanism**

The core of order initiating dynamics is the demand order, so every activity of enterprise must be carried out in accordance with the demand order of customers. Therefore, a mechanism centralizing the information flow of order, driving physical and money flow should be established [3].

##### **2.1.1.1 Order is the initiation power for every management and business activity.**

To establish information network for obtaining the customer orders is the fundamental basis for firms implementing every business activity. The Internet has provided the unprecedented condition for business to get the orders throughout the globe [5]. Through the Internet, Firms could conveniently conduct requesting, quoted price, negotiation for categories and specifications, confirmation for qualifications, placing orders, payment, and consignment notification, etc [6]. As soon as firms receive the orders, the demand order would be emitted to every associated section including acquisition, production, assembling, goods arrangement, and shipping, etc., and the manufacturing and delivery process would be started and operated.

##### **2.1.1.2. Logistics is the essential warranty for satisfying the customer demand and obtaining more orders from them.**

Logistics is the whole process and activities including acquisition, issuing, production, goods arrangement for final product, shipping, delivery, and services after sales, etc. in accordance with the customer demand orders. Under the central plan-pushing pattern, this process would be operated according to the plan of firms. Due to the uncertainties for whom the products would be sold to, that would unavoidably lead to a lot of warehouse, inventories, goods moving come-and-go, and enormous products out of season, the inventories need to be kept enormously to meet uncertain demand from the production, and the money flow would be slowed down. The order

initiating dynamics will, to some extent, resolve these problems. It requires timely, rapid, and accurate logistics to guarantee the implementing of order initiating dynamics. Therefore, enterprises must reform greatly the physical distribution system. Just In Time could play a great role in this area. JIT acquisition, JIT issuing raw materials, and JIT arrangement for goods, etc., could be adopted available, and that would satisfy the schedule for customers farthest [4].

#### **2.1.1.3. Good operation of the monetary flow is the performance for order initiating dynamics, as well as the precondition of it.**

Under the condition of efficient logistics, it would decrease the leading-time effectively between the order placing from customers and the goods delivery to customers from suppliers. It is possible for manufacturers complete drawing back money from the customers and the payment to the raw material suppliers on time before the schedule of suppliers coming up. Thus, the monetary operations of manufacturers enter into a good circulation [6].

#### **2.1.2 Establishment of soft manufactures system**

It would raise a higher requirement to manufacturing process for adopting order initiating dynamics. Manufacturing process must react to the changes of market more rapidly. This needs elasticity, so that the manufacturing process could carry out transformation timely and adapt to the customized mass production [6]. Order would be processed with small size and multi times on the basis of JIT. The priorities of production would be driven by the delivery schedule required. One production line should be able to adjust and arrange differently, so that it could produce different specifications of product for different orders. The personals of production plan of manufacturers also need to work together with the planners of customers to develop strategy for every market segmentation [4].

#### **2.1.3. Just In Time for acquisition**

For a large international household appliance manufacturer, the acquisition should be carried out globally, so that the quality units could be obtained with a lower cost. The trade-off relationship between manufacturer and supplier should be transformed into a strategic partnership relationship, the acquisition management should be transformed into resource management, and the fair, interactive, and win-win alliance and corporation with suppliers should be pursued. In order to realize JIT mode, the

manufacturer will have to invest to create a facility base nearby for strategic partners to establish factories for the production required by the firm [8].

#### **2.1.4. JIT for issuing of raw material**

The objective of JIT in material issuing is to decrease the warehouse and inventories for supporting the production. Similarly, the material issuing under the order initiating dynamics need to take the order information as the core, adopt the JIT mode, and get ride of material waste drastically.

#### **2.1.5. Physical distribution for products**

Physical distribution includes arrangement, transportation, and delivery for final products. The stowage, transportation and unloading from facilities to logistics center, arranging in pair and groups in the logistic center, and the stowage, transportation, unloading and delivery from the logistics center to places appointed by the customers, every section should be handled and controlled by machinery, automation and information technology, so that the delivery on time could be guaranteed, the error rate and damage rate be decreased, and the operation efficiency enhanced. In developed countries, manufacturers product logistics usually outsourced to the 3<sup>rd</sup> party logistics providers [8]. But in this country, the specialized service level of the 3<sup>rd</sup> party logistics could not satisfy the need of large household appliance manufacturers for the time being, so it is necessary for manufacturer to set up the logistic system for product distribution themselves.

In summary, in order to adopting the order initiating dynamics, enterprises should reform their logistics management, establish a new circle model for physical distribution and information circulation. Only by this mean, could a road be paved for implementing the order initiating dynamics [9,10].

### **3. Haier altered its logistics system for adopting the order initiating dynamics<sup>①</sup>**

#### **3.1. The situation Haier was facing at the end of last century**

Haier has been one of the firms growing fastest in China since the

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<sup>①</sup> Source: Author conducted the investigation and the data was collected from China International Electronic and Household Exposition Forum. The forum was hold from June 18 through June 20, 2005 in Shangri-la Hotel, Qingdao.

middle of 1980s. It was established in 1984 as a refrigerator-producing factory. From then, it has grown very fast. By the end of the year 2005, its total sales volume has reached 108 billion yen RMB (about 13.3 billion us dollar). The business fields of Haier have diversified from refrigerator to whole household appliances. Haier has been one of the most successful companies in China, as well as in the World.

Among a lot of factors that bring about success for Haier, the most important one is its OEC management system (Overall Every Control and Clear). The firm has enjoyed very good reputation for a high product quality in home and abroad just because of its strict management.

As the largest household appliance-manufacturing firm in China, Haier has been facing increasingly severe competition from the industry of both home and abroad in recent years. Haier had established and operated the first class system for acquisition, manufacturing, and marketing in China under the plan-initiating dynamics<sup>②</sup> before 1999. But the competence and the profit potentials of the traditional system has been nearly exhausted in recent years, because the rivals had also set up similar systems and realized perfect operation. Continuous price war has made manufacturers operate under the balance point of profit and loss. So, as other firms, Haier had to look for new and more profitable business approaches strategically for the further development.

Every company in household appliance manufacturing in China has to seek new ways to maintain and increase their profits and return of investment. They are turning their insight to the logistics, and realized that the logistics is a new and underdeveloped field to dig up. Haier is one of these firms that believed this earliest. Paying attention to customer relationship management, establishing real customer oriented organization is a logic choice for firms like Haier. Haier just started the dynamics

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<sup>②</sup> Plan-initiating dynamics means that the operation of enterprises is driven by its central plan. Enterprise usually organizes its own force to conduct the market investigation and research, draft business plans at different level of the organization, and then put the plans into operation. The business flow of this model is: survey-plan-production-inventory-transportation-inventory-sales. Chinese household appliance manufacturers have been adopting this model for many years. This model is being considered “one of the main reasons that resulted in price wars in recent years.” Mr. Zhang Ruimin, the CEO of Haier, called this “to produce for inventory”.

alteration for its business under this situation. Haier chose the order initiating dynamics<sup>③</sup> strategically.

But in China, (1) retailing has not developed. Although there a few of regional retailer chains, such as Guomei in northern China, Suning in Yangtzi Delta area, and Sanlian in Shandong peninsula, the national retailer chains have not formed national manufacturer brand could not be matched by available retailer brand. This brings a difficulty for national manufacturer to set up a business union to manage customer effectively; (2) the function of 3<sup>rd</sup> party logistic providers are still poor. We have numerous transportation companies, but we don't have real 3<sup>rd</sup> party logistic providers. Their service level and ability are still far from satisfaction for the requirement of household appliance manufacturers; and (3) there are a lot of barriers for the establishment of the business alliance in China just because of the institutions and culture [11]. So although the order initiating dynamics hides great profit and competence potentials, the adoption of it, to some extent, is still of the features of traditional manufacturer marketing pattern. So, it is more feasible to establish a logistic system owned by the manufacturers themselves to meet the needs for the order initiating dynamics.

### **3.2. Haier altered its logistic system for implementing the order initiating dynamics**

Since the implementation of international strategy in October of 1999, Haier has been carrying out the modern logistics revolution, redesigned and reconstructed its business flow. The goal of this reform is to enhance its reactive speed to the market, reduce the inventories and improve the operation efficiency. The firm is trying to adopt more order initiating dynamics by this mean, as well as improve its competence and potentials for the future development.

Haier company reformed its organization, transmitted its pyramid structure into a flat one, and established a logistics pushing division, which was set up on the basis of more than ten strategic business units. The new division managed three units functionally. These are acquisition, inventory,

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<sup>③</sup> Order-initiating dynamics means that the operation of a firm is driven by orders obtained from customers by the firm. Although in many industries, such as garment, printing, airplane manufacturing, etc., the order initiating dynamics is a very common business pattern, for household appliance manufacturing, it is a new one, especially in China.

and distribution. Their functions are uniform purchase, uniform issuing the raw materials for production, and uniform distributing the final products for customers. By this mean, the internal resource can be integrated and the external resources optimized. This is an approach to realize the integration for acquisition, production support and goods distribution strategically.

The concrete reforms carried out in Haier can be summed up as the following:

### **3.2.1. To integrate the purchase**

The first step for the reform of logistics is to integrate the purchase. The company has focused on transiting the trade relations between the suppliers and the company into partnership strategically, and transforming the purchase management into resource management. Among the “Fortune”500 largest firms, nearly 50 have been the suppliers for the firms. Haier has developed two industrial gardens in Huangdao and Jiaozhou (the vehicle distances between both sites and the main production base are under 2 hours). This greatly facilities the partners from both home and abroad to set up facilities, as well as to adopt the Just In Time system between the partners and the company.

### **3.2.2. To uniform the raw materials issuing**

In order to enhance the efficiencies for the raw materials issuing, “to overturn the traditional warehouse management”, the company set up two intelligent warehouses and an automatic logistic center. Through application of ERP informational logistic technology, the company has realized more effective inventory control, and adopted the JIT issuing for some raw materials. The vessels for the physical distribution have adopted ceiling, containerizing, standardization, and generalization. The materials has been moved mechanically from workshop to workshop, and the workshop issuing has realized the control with the BOM system, positioning management system, consumption monitoring system, and continued replenishment system. The company has achieved the goal of “to wipe out the space with the time” by these means.

### **3.2.3. To optimize the distribution system for final products**

When reforming the physical distribution for acquisition and issuing of materials, Haier was reconstructing its final product distribution system simultaneously. The improved final product distribution logistic system includes 42 domestic distribution centers, 2 international ones located in



Hamburg of Germany, and Dubai of United of Arab Emirates respectively. Haier has established a SBU for logistics, it has owned more than 200 trucks itself, and about 16000 trucks can be mobilized when needed. This force can deliver 50000 pieces final products per day averagely. In order to resolve the problem of carrying no frights on way back, the branch has become the 3<sup>rd</sup> logistic parties of Japanese Meibao Group, Robust held by Danon, Nestle firm, and Yili Milk Powder company, etc.

#### **3.2.4. To set up an elastic production system**

Elastic production system is one of the necessary conditions for adoption of the order initiating dynamics. Haier has completed alteration for its assemblies. Now, every assembly could be changed to meet the production needs of different specifications of one type of product within a day.

### **4. Achievements**

The achievements that Haier has fulfilled through the reconstruction for its logistics are as the following:

#### **4.1. The cost of purchase has downed, and the quality of acquisition has been improved**

Haier needs more than 15 billion yen RMB acquisition, including more than 15000 kinds of goods every year for its manufacturing and operation. These goods had been bought from more than 2000 suppliers before. Through the integration, the number of suppliers has dropped to about 900, the buying persons of the firm have decreased 1/3, and the purchase cost diminished 5%. The strategic partnership between suppliers and the firm guaranteed the technological advancement and high quality for the final products of the firm, and greatly shortened the cycles for new product development and its commercialization.

#### **4.2. The cost of both stock and transition have been decreased enormously**

The average stock time of Haier Company was 30 days before. Only the main base in Qingdao needed to rent more than 2000000 square meters of stock house for its inventories. After the "stock house revolution", stock and transition times has been decreased 3/5 averagely, the floor area of stock house of the group dropped to 26000 square meters. The utilization of ERP has effectively shortened the time of order cycle. The orders received by the

firms in the first half of 2002 have increased more than 50% comparing with the same period of last year.

#### **4.3. The efficiency of distribution of final products has been enhanced**

At present, Haier Company has ability to accomplish the delivering of goods to distribution center in 6-8 hours, regional delivering in 24 hours, and main transporting routes delivering in 4 days domestically. The delivering time to European customers has also been greatly shortened through Hamburg distribution center.

#### **4.4. The payment efficiency has been improved**

Through the alteration of logistic and the application of electric business information technology, the rate of payment by Internet of the firm has reached to 80%, and the rate of payment in time has fulfilled 100%. The firm has put an end to debt chain, and raised the prestige by this mean. Through the payment by Internet, more than 10 million yen RMB expenditure could be saved for the customers every year.

### **5. Prospect**

It is easier saying than doing for a household appliance-manufacturing firm to adopt order-initiating dynamics, especially in China. The business pattern is being undergoing modernization in China for the time being. The application of information technology is just in primary stage. Maybe the most difficult thing is to forecast the demand change accurately and control the demand fluctuation effectively. If the customers in lower reaches of channels were not able to forecast the demand accurately, the whole supply chain, including the manufacturers, would not be able to obtain sufficient and dependable orders. Thus, it will undoubtedly to run great risk for manufacturer to adopt the order initiating dynamics. Maybe this is a very new problem that the household appliance manufacturers like Haier are being facing. On the other hand, we have reasons to believe that it is just household appliance manufacturers that will really push the business pattern forward in China, for the industry has been the real pioneer in China's market economy reform.

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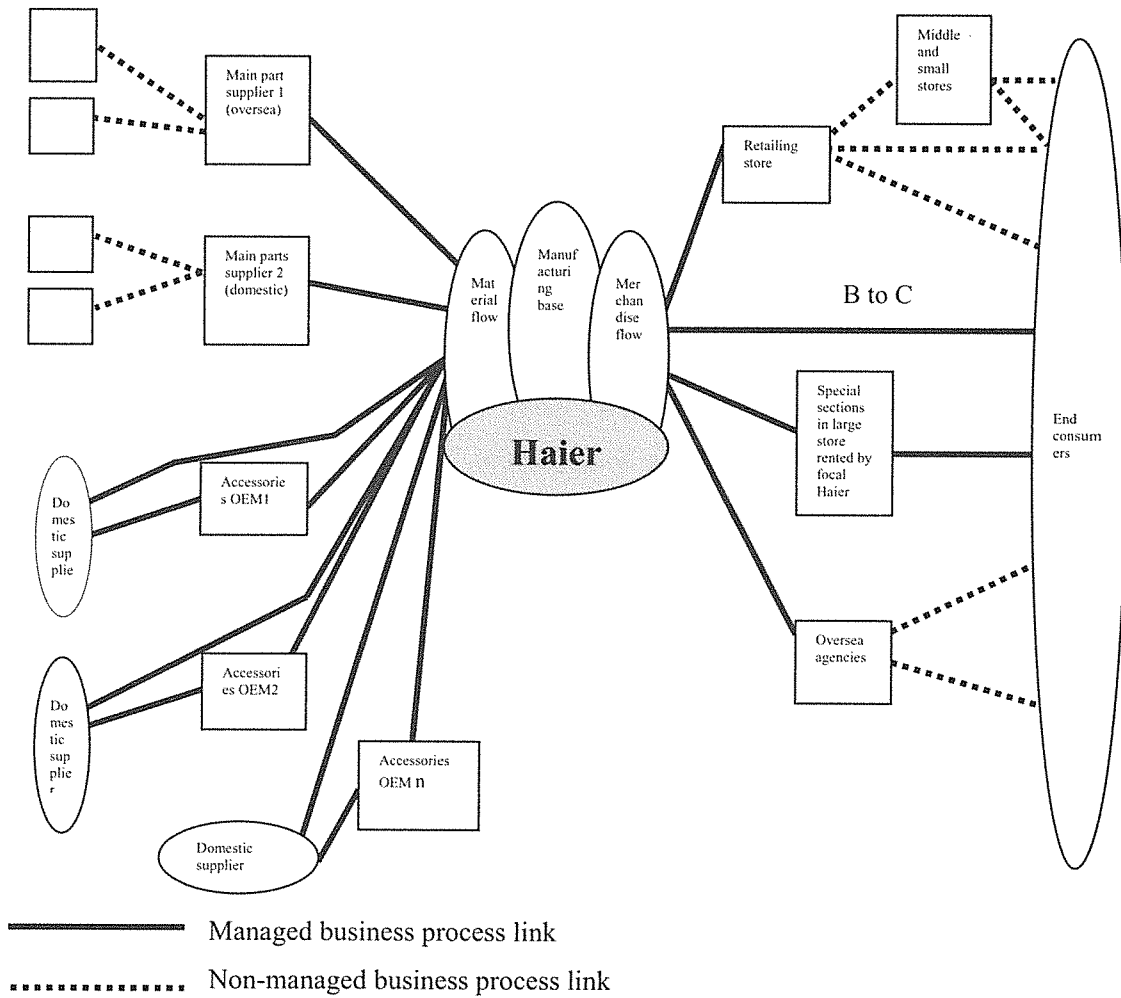


Fig. 1: Business Relationship Network of Haier